Author's response to reviews

Title: A systematic exploration of differences in contextual factors related to implementing the MOVE! Weight Management Program in VA: A Mixed Methods Study

Authors:

Laura J Damschroder (laura.damschroder@va.gov)
David E Goodrich (david.goodrich2@va.gov)
Claire H Robinson (claire.robinson@va.gov)
Carol E Fletcher (carol.fletcher@va.gov)
Julie C Lowery (julie.lowery@va.gov)

Version: 2 Date: 6 May 2011

Author's response to reviews: see over
Referee 1

**Major Compulsory Revisions:**

1. It would be informative to provide more details about the semi-structured interview, such as the questions themselves and how they mapped on to the CFIR constructs, or at least the number of questions and the constructs they covered.
   - We have taken references to the CFIR out of this paper because our focus is on results related to Klein, et al's implementation model. It was too much to include descriptions of both along with the mapping in this paper. We have, however, provided the interview guide in Additional File 1 and added a comprehensive table of constructs, measures, and definitions (Table 2).

2. The Methods indicate that the quantitative data were derived from the Klein et al., implementation model (or questionnaire?), while the qualitative data were based upon the CFIR, but it is not entirely clear to what extent the two overlap. The Klein et al model is described as having 5 constructs, which do equate with the item groupings in the Appendix. It is somewhat confusing because the 4 subheadings for the qualitative results correspond to the same 5 constructs (2 are combined into one subheading). Do the CFIR and Klein et al model use the same constructs, or was the CFIR simply used to develop questions for the semi-structured interview questions and the answers to these categorized within the Klein et al., constructs? Either way, it would be helpful to include a brief description of the CFIR for readers who are unfamiliar with it and explain how it corresponds to the Klein et al., model.
   - We have added a new section to describe the implementation model used in this study. We have also added Table 2 which provides detail on the constructs and how they were operationalized for this study. We have also added more explanation about NCP, the MOVE! program, and clarity in what we mean by implementation and its linkage to participation rates which were used to select our study facilities.
   - As mentioned above, we have taken out reference to the CFIR because the mapping/relationship between the two do not add to this paper and instead, add confusion. Space constraints preclude adequate treatment of both.

3. The results section does not mention the results of the t-test, which is alluded to in the abstract and discussion. But the value of the t-test for such a small sample is questionable, especially since it does not adjust for the nesting of subjects within facilities. Consider using the quantitative data for some type of non-parametric test (e.g., ranks). Otherwise, the limitations of the quantitative data should be stressed in the discussion and abstraction.
   - We have taken out the t-test differences because the appropriate unit of analysis should be the facilities, not the individuals. Klein and colleagues conceived these measures to be summary, collective perceptions of individuals in an organization. In this version, we have presented the summary measures graphically so that the trends (the positive association between implementation effectiveness and scores on these measures) can be seen. Our sample is insufficient for statistical testing (n=5) but the trends are qualitatively strong in this small sample.
Minor Essential Revisions:

1. Although mentioned in the abstract, the methods do not clearly specify whether or not the sites were VA medical centers or outpatient clinics.
   • This is clarified in the Site Selection section under Methods.

2. Site selection was apparently based upon “the number of patients enrolled ….as a proportion of an estimate of the number of eligible patients based on an estimated prevalence of 72%”. Although Table 2 reports the number enrolled for each site, it would be helpful to know what proportion that represents of “eligible” patients (whether estimated or actual).
   • This is now listed in Table 2.

3. Please include the actual number of patients that the “transition” site had enrolled by October 2007
   • We have included actual rates of participation for FY 2007 and 2008 in Table 3.

4. Quantitative Data Section in Methods: The first sentence indicates that responses were elicited to 18 “closed-ended” questions and refers the reader to the Additional File. The items in the Appendix, however, are statements, not questions. Closed-ended questions are those that can be answered by a “yes” or “no” response, or a brief phrase (e.g., Where were you born?). It seems more appropriate to indicate that subjects rated their level of agreement with the 18 items using a Likert-scale.
   • We have made this change.

5. Table 2 indicates that the “Midwest” clinic had “Level 4 – Intensive outpatient lifestyle counseling,” which seems inconsistent with Table 1’s description of Level 4 as involving “medical” management (e.g., VLCDs). Please correct or clarify.
   • We have clarified the noted discrepancy in Table 3. Note that we have taken out the geographic location of the participating facilities to help preserved their anonymity.

Discretionary Revisions:

1. Given the limitations of the quantitative data, the qualitative data are more compelling. Two of the most interesting pieces of qualitative data are that: 1) none of the facilities had implemented the telephone support, which is described as a “mandatory” component; and 2) that one site referred their patients to community-based programs with no follow-up. The authors are encouraged to more systematically document what aspects of the program were and were not implemented at the various sites, if this information is available in the data.
   • We have rearranged results to highlight, more clearly, our qualitative findings with respect to program components. We have added a paragraph that summarizes these findings in addition to the listing in Table 3.
Referee 2

Major compulsory revisions:

1. The authors describe the sampling of the 5 sites as "purposive" but do not give more details on how those sites were actually selected. Where they the "most extreme" sites on the distribution of performance, were they selected randomly from high and low performers, or were other factors (convenience; proximity; personal contacts) used?
   - The description of the process for selecting sites has been expanded significantly to address these questions.

2. I am curious why, once the authors determined that sites needed to be re-classified as a result of information gathered during the interview, that they chose to use those sites under the new (post-interview) classification rather than the original "intent". By classifying the site based on the interview, rather than the original measure that was meant to serve as a surrogate of implementation, bias may be introduced. I realize that mixed method studies often utilize a "pragmatic" rather than "pristine" approach, but I would have greater confidence in the conclusions if the observed trends were the same upon exclusion of those reclassified sites.
   - We have added significant clarification in our results, dedicating a new section to our assessment of implementation effectiveness and relating that to our original classification. We have taken out the t-test for difference between individuals at high versus low implementation effectiveness because the appropriate unit of analysis is the facility – not individuals. Klein and colleagues conceptualized these measures as the summary, collective perceptions of individuals in an organization. We have presented the summary measures graphically so that the trends (the positive association between implementation effectiveness and scores on these measures) can be seen. Our sample is insufficient for statistical testing (n=5) but the trends are strong in this small sample.

Minor revisions:

1. For the reader outside of VA, a bit more information about overall organizational context should be included, especially when discussing such factors as working down clinic backlogs (VA has had a huge increase in users, and has adopted an emphasis on advanced clinic access) and the role of performance measures.
   - We have added more description and clarification on these points.

2. The authors should provide a brief rationale for their choosing the particular implementation model selected for this study.
   - We have added a new section to describe the implementation model used in this study. We have also added Table 2 and Figure 1 which provide detail on the constructs and how Klein and colleagues’ model was operationalized.

Discretionary:

1. The manuscript may benefit from visuals that describe the CFIR and Klein/Conn/Sorra models.
   - A visual of the Klein, Conn, and Sorra model, adapted for this study has been included in this revision as Figure 1. We have taken out references to the CFIR because the focus of this paper is on Klein and colleagues’ model. The CFIR complicates this paper too much, given space constraints.
Referee 3

Major Compulsory Revisions

Background

1. 1st paragraph: last sentence is unclear. ‘Taking a toll among Veterans’ does not provide information to the reader; ‘burden of illness’ should be clarified so that the reader understands whether it refers to providers, VHA or something else.
   - This has been rewritten to provide more clarity on these points.

2. 2nd paragraph: ‘challenge’ does not have a clear referent. The purpose of the MOVE! Program is not stated. 3rd sentence: ‘dissemination’ does not have a clear referent and is not described. The role of NCP is not clearly described. It is not clear that stating the number of patient visits [patient-level data] is useful information, since the last sentence focuses on the MOVE! program at the facility level. How ‘implementation’ of the program was measured is not described.
   - We have rewritten and added additional explanation (including a new paragraph) to clarify these points.

3. 3rd paragraph: The statement of objective does not clearly follow from the previous paragraphs; the objective also needs some clarification. The reason[s] for selecting organizational factors as variables and the measurement of ‘implementation’ both need to be explained.
   - We have added a paragraph explaining the linkage between implementation and organizational and other contextual factors.

Methods

1. 1st paragraph: The choice of mixed methods design needs explanation: data from this approach that could not otherwise be collected; significance of the data for analysis; description of those data that were best collected by quantitative methods and those that were best collected by qualitative methods; overall rationale for mixed methods. ‘Implementation’ must be defined here so that the reader will understand what was measured and the rationale for its measurement. It’s confusing to read in the previous section and this paragraph that implementation is based on the percentage of eligible Veterans enrolled in MOVE!, and then to read that the number of enrollments ‘reflects the extent’ of implementation. It’s also unclear here what enrollment means, although that is discussed later.
   - We have added a section that describes the underlying implementation model used to guide our data collection and analyses. This provides better background and rationale for our mixed methods approach which we have expanded and clarified in this paragraph.

2. 2nd paragraph [sample selection]: Selection criteria as well as the rationale for maximum variation among sites should be stated. The rationale for the interviews should have been provided in the previous paragraph, I think, but, if not, it should be given here. The sampling technique is important only insofar as it identified staff to be interviewed. In this paragraph, ‘degree of implementation’ is used without definition.
   - We have clarified these points and provided more information about site selection and individuals who participated in the interviews.

3. 3rd paragraph [data collection procedures]: Please clarify which staff were invited to participate and consider briefly describing how they were contacted, if verbal consent was obtained and whether information about their position was also collected.
   - We have added more detail about how interviewees were identified, invited, and consented.
Quantitative and Qualitative data paragraphs

1. Since this is a mixed methods study, I think these paragraphs could be merged into one section which would more clearly explain the actual use of mixed methods. For example, the five domains could be listed, along with a brief explanation of how and why they were adapted for use in this study. If the closed-ended questions were adapted, please explain that process as well. The discussion of the model and the relationships between and among the various factors would fit better in the results and discussion section. I have similar comments about the open-ended questions: how they were developed and tested; criteria used for their selection from a comprehensive list.
   - We have added a new section that describes the implementation model and a new Table 2 which lists all constructs in detail. We have also described the rationale for selecting the limited number of quantitative items and how they were modified for this study.

2. A statement of the areas to be explored with these questions would be helpful. It is also important to describe the criteria for the interviewers for the open-ended questions: experience in research and, particularly, implementation research. If the interviewers were provided information about the MOVE! program, that information should be briefly described, as well as the criteria used to decide when additional details would be sought from respondents. The statement about understanding organizational context and implementation process is an analytic issue more than a data-gathering issue and could be further discussed later in the manuscript.
   - More details on interview approach, data collection, and analyses have been provided.

Data analysis

1. Organizational factors data: It seems that these data were analyzed by domain within each site and across sites – but that should be clearly stated. Besides the comparisons of high v. low sites, if data from other sites were also analyzed, that should be stated; if not, give the rationale for no analysis of that data. For the interview data, the rationale for content analysis should be briefly presented. Then the development of codes should be described; if the codes were linked to the organizational factors, the links (or categories) should also be described. Were the respondents considered ‘equals?’ In other words, was the data analyzed by provider type or profession or place in the hierarchy of the facility? Who were the analysts and what were the criteria for their selection?
   - We have clarified our process of coding, analysis and role of the coders/analysts.

2. Who was involved in the consensus process? Please define the term ‘critical analysis.’ Was there an outline for the interview summary? How was it developed and who was involved? Were the interviewers involved in the analysis process? If so, what was the rationale? If not, what was the rationale? For the discussion by the team [of six analysts], what were the criteria for the discussion? Did they discuss only one summary at a time or more than one? How were the case summaries developed: who involved; criteria for content. What were the criteria for comparative analyses [between and among sites – please clarify] and who wrote them [or was the main author]. Same questions apply for the syntheses.
   - We have attempted to clarify this process within the space constraints of the paper.

Minor Essential Revisions:

1. Principal investigator (not principle)
   - Thank you for pointing this out. This has been corrected.

Discretionary Revisions:

Results

1. I think the data could be presented by site and by the organizational factors or, perhaps, by components of the MOVE! program, and incorporate quantitative and qualitative data. As it is, the
presentation seems choppy for the sites, with the role of individuals seeming more important than it was [at least as I understood the analysis section].

- We experimented with several formats for presenting results including what you suggest. We settled on the current sequence because it was most efficient in highlighting findings within space constraints. We are hopeful that our more thorough laying of groundwork through presentation/description of the implementation model and constructs helps to smooth our presentation. Findings have been reordered to follow the flow of the guiding model.

2. The qualitative data section seems lengthy and unfocused. First, it’s not clear from the background and methods sections why regional staff is included in this analysis. Second, although the qualitative data are presented by organizational factor, these data could have more impact if they 1) provided nuance and 2) elucidated the relationships in the model that was presented earlier in the manuscript. [Or the model could be presented here to provide a context for the results.]

- We have integrated quantitative findings in with qualitative findings. As stated above, presentation of the model up front should help provide a roadmap for these findings.

3. Management support: The paragraphs about a) transition site and b) physician champions seem to stand alone more than to describe something interesting or important about this domain.

- These have been reordered and clarified.

4. Implementation climate: A definition would be helpful or, since the terms barriers and facilitators have been used previously in the manuscript, they could be used here. This section can be tightened considerably and the last two paragraphs can be used to present nuances.

- We have provided clarification on this term in the text and in Table 2.

5. Communications: This sub-section begins with a discussion that includes referrals and undefined ‘communications, so it’s hard to figure out what the main point will be. In the second paragraph, MOVE! staffing is described, which probably belongs in the background section.

- We have reorganized these findings to be clearer.

Discussion

6. This section can also be strengthened by more direct statements and by linking the discussion to the findings. In the first paragraph, for example, emphasizing the quantitative results only discounts the importance of the qualitative results. Although the last sentence of this paragraph mentions dissemination, it doesn’t appear that there was sufficient data about dissemination in this project unless it was collected and not reported in this manuscript.

- We have rewritten and re-ordered significant sections of the Discussion. Hopefully, this will address your thoughtful suggestions to improve.

7. 2nd paragraph: There’s important data here, so I suggest a focus on the findings at high implementation sites – from more general findings to specific ones.

- We have rewritten and re-ordered significant sections of the Discussion. Hopefully, this will address your thoughtful suggestions to improve.

8. 3rd paragraph: 1st sentence doesn’t add much and the next-to-the last sentence is vague.

- We have deleted the first sentence and rewritten significant parts of this paragraph.

9. 4th paragraph: The first part of this paragraph needs a clear focus. Also, by mid-paragraph, the statement that concludes that referral to a community program means low importance on MOVE! doesn’t seem to be based on the data presented in this manuscript. There may have been other barriers; at least a referral was made to a weight-loss program, rather than nothing done.
10. 5th paragraph: This paragraph can be shortened and focused on the issues of team development. The contrast between teams at high-performing and low-performing sites can easily be made.
   • This paragraph has been significantly rewritten and reorganized.

11. 6th paragraph [study limitations]: In sentence four, I suggest using the phrase, 'purposive sample design was selected' to maximize variation. Then say that you expected to identify differences and commonalities [or whatever words seem appropriate] within domains and across sites. Then you can continue on to your second point, so long as you briefly define ‘administrative data’ for your non-VA readers. The reasons you revised the assignment of sites to categories need to be revised so that they are clear and understandable. Finally, it’s appropriate to state that the data for these analyses were collected [some] months following dissemination [however it was done] of the MOVE! program.
   • This paragraph has been significantly rewritten.

Conclusions

12. I think the recommendations need to be clearly stated, as well as to whom they’re directed. The abstract presents them much more clearly.
   • We have addressed this as you suggest.